

1006 Ferns  
PART 1.]

[PRICE 1s. Post free 1s. 1d.]

# ILLUSTRATIONS

OF

## FERNS,

FOR

## AMATEURS.

BY

C. SHAW,

"THE FERNERY," FINCHFIELD, WOLVERHAMPTON,

1878 [1/10/1878]  
[ENTERED AT STATIONERS HALL.]

Published by the Author at the above address, where Copies can be obtained.



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A M A T E U R S .

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— 0-0 —

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## P R E F A C E .

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IN preparing this work for the use of Amateurs I have had in view the want of some means of identifying the Ferns without so much letter-press description, which is so confusing to Amateurs, and therefore I have arranged it in the simplest and cheapest form so as to be within the reach of all classes.

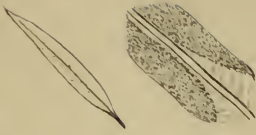
It is well known that an illustration of any object is far more preferable to letter-press description, and I sincerely hope this work will be of service to all who peruse it.

I have named the ferns in accordance with a work published by Sir W. Hooker, and think it advisable to follow that work as near as possible throughout.

CHARLES SHAW.

“THE FERNERY,”

FINCHFIELD, NEAR WOLVERHAPTON.



1.

2.

*Acrostichum conforme.*

1.



1.

2.

*Acrostichum crinitum.*

2.



1.

2.

*Acrostichum pellatum.*

3.



1.

2.

*Adiantum capillus-veneris*

4.



1.

2.

*Adiantum capillus-veneris daphintes*

5.

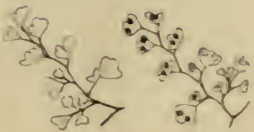


1.

2.

*Adiantum capillus-veneris magnificum*

6.



1.

2.

*Adiantum cuneatum gracillimum.*

7.



1.

2.

*Adiantum edgeworthii.*

8.



1.

2.

*Adiantum excisum multifidum.*

9.



1.

2.

*Adiantum feei.*

10.



1.

2.

*Adiantum macrophyllum*

11.



1.

2.

*Adiantum peruvianum.*

12.





1.



2.



3.



4.



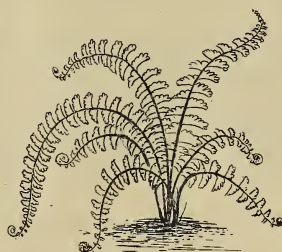
5.



6.



7.



8.



9.



10.



11.



12.

## ACROSTICHUM CONFORME.

Fronds about 9 inches long and  $\frac{1}{2}$  to 2 inches broad, the sterile frond is usually narrower than the fertile one. The fronds spring from a creeping rhizome, which is densely clothed with brown hairs or scales. The small engraving, No. 1, represents the shape of the frond, and No. 2, a portion at a larger scale, showing the sori on the underside. Native of Brazil. A stove fern.

## ACROSTICHUM CRINITUM.

Sterile fronds 18 inches long, 9 inches broad, the fertile ones are much smaller, both sides and edges are covered with black hairs, the mid-rib is dark brown. The small engravings, 1 and 2, represent the upper and lower surface of a frond. Native of the West Indies. A stove fern.

## ACROSTICHUM PELTATUM.

Sterile fronds  $1\frac{1}{2}$  inches long, the fertile fronds are covered all over the underside with the sori. The fronds spring from a slender ereeping rhizome which is coated with scales. The small engravings, 1 and 2, represent the sterile frond on both sides. Native of the West Indies. A stove fern.

## ADIANTUM CAPILLUS-VENERIS.

Fronds about 9 inches long, and springing from a creeping rhizome, the stems are purplish black and polished, the rhizome is covered with dark brown hairs. The small engravings, 1 and 2, represent the upper and lower surface of a pinnae. Found in all the warm parts of Europe. Half-hardy fern.

## ADIANTUM CAPILLUS VENERIS-DAPHNITES.

Fronds from 6 to 8 inches long, erect, springing from a creeping rhizome, the pinnae are crisped, the stems are purplish black which terminate in veins in the pinnae, the small engravings, 1 and 2, represent the upper and lower surface of a pinnae. Half-hardy fern.

## ADIANTUM CAPILLUS-VENERIS MAGNIFICUM.

Frods vary from 6 to 10 inches long, the pinnae are from 1 to  $1\frac{1}{2}$  inches broad, deeply cut or fringed, and overlapping. The stems are purplish black, and slender, springing from a creeping rhizome. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnae. Half-hardy fern.



### ADIANTUM CUNEATUM GRACILLIMUM.

Fronds 9 to 15 inches long, and 4 to 6 inches broad. The stems are dark purple, or nearly black, and very slender. The small engravings, 1 and 2, represent a portion of a frond full size. A stove fern.

### ADIANTUM EDGEWORTHII.

Fronds 10 to 12 inches long, fertile at the apex. The stems are dark brown, covered over with dark brown hairs. The small engravings, 1 and 2, represent the upper and lower surface of a pinnae. Native of the East Indies. A stove fern.

### ADIANTUM EXCISUM MULTIFIDUM.

Fronds from 12 to 16 inches in length. The apex of the fronds are very often divided into two or more branches which are sometimes again divided and gives it the appearance of a tassel, the stems are light green changing to nearly black with age. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnae. A green-house fern.

### ADIANTUM FEEI.

Fronds 18 to 24 inches long, the stems are covered all over with fine brown hairs. The fronds when in a young state are of a bright red, changing to brown with age. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnae. Native of Mexico. A stove fern.

### ADIANTUM MACROPHYLLUM.

Fronds about 12 inches long, springing from a creeping rhizome, and are erect, when young they are pinkish changing to green, and the stems changing to black. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnae. Native of the West Indies. A stove fern.

### ADIANTUM PERUVIANUM.

Fronds from 15 to 30 inches long, stem purplish black, the pinnae are 2 to 2½ inches long. The small engravings, 1 and 2 represent the upper and lower surface of one of the pinnae. Native of Peru. A stove fern.



1. 2.

*Adiantum reniforme.*

1.



1. 2.

*Adiantum  
sanctæ catherinæ.*

2.



1. 2.

*Adiantum setulosum.*

3.



1. 2.

*Adiantum trapeziforme.*

4.



1. 2.

*Alsophila excelsa.*

5.



1. 2.

*Anemia phyllitidis.*

6.



1. 2.

*Aspidium  
angulare grandiceps.*

7.



1. 2.

*Aspidium caryotideum.*

8.



1. 2.

*Aspidium falcatum.*

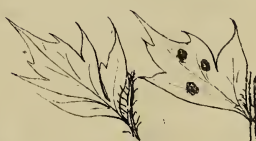
9.



1. 2.

*Aspidium fortunei.*

10.



1. 2.

*Aspidium  
illicifolium gracile.*

11.



1. 2.

*Aspidium lonchitis.*

12.



1.



2.



3.



4.



5.



6.



7.



8.



9.



10.



11.



12.



## ADIANTUM RENIFORME.

Fronds about 6 inches in length and 2 inches broad, springing from a slightly creeping rhizome. The stems are polished dark brown. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnae. Native of Madeira. A green-house fern.

## ADIANTUM SANCTÆ CATHERINÆ.

Fronds 12 to 20 inches long, stems polished purplish black. The pinnae are  $1\frac{1}{2}$  to 2 inches long. The fronds springing from a slightly creeping rhizome. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnae. Native of Brazil. A cool stove fern.

## ADIANTUM SETULOSUM.

Fronds 9 to 12 inches long, stems polished and almost black, the upper surface of the pinnae have a few black hairs on them. The fronds spring from a slightly creeping rhizome. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnae. Native of New Zealand. A green-house fern.

## ADIANTUM TRAPEZIFORME.

Fronds 24 to 36 inches long, stems purplish black and polished, the pinnae  $2\frac{1}{2}$  to 3 inches long, of a light green colour. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnae. Native of the West Indies. A stove fern.

## ALSOPHILA EXCELSA.

Fronds 18 to 24 inches long and 6 to 10 inches wide, the stems of the fronds are coated with brown hair and extend nearly to the extreme end. The small engraving, 1, represents a portion of the upper surface of a frond, and 2 the underside of a smaller portion at a larger scale. Native of Norfolk Island. A green-house fern.

## ANEMIA PHILLITIDES.

Fronds 18 to 24 inches long, the stem and pinnae of a pale green, scaly at the base of stem. The small engraving, 1, represents the upper surface of one of the pinnae, and is  $\frac{1}{5}$ th full size, 2 represents a portion of the fertile pinnae. Native of Tropical America. A green-house fern.

### ASPIDIUM ANGULARE GRANDICEPS.

Fronds 18 to 24 inches long, the stem and mid-rib is covered with dark brown scales, the apex of the fronds are three or four times divided, and those again divided into three or four, forming a tassel, the pinnæ at the side of the stem are slightly tasseled. The small engravings, 1 and 2, represent the upper and lower surface of a pinnæ. A hardy fern.

### ASPIDIUM CARYOTIDEUM.

Fronds 12 to 24 inches long, and covered with brown scales towards the base, also the crown. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnæ. Native of Japan, and China. A greenhouse fern.

### ASPIDIUM FALCATUM.

Fronds from 12 to 24 inches long, the stems are covered with brown scales, changing to black at the crown. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnæ 1/5th full size. Native of Japan and China. A green-house fern.

### ASPIDIUM FORTUNEI.

Fronds 10 to 14 inches long, stem dark green, changing to brown, covered with large brown scales at the crown. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnæ about  $\frac{1}{4}$  full size. Native of Japan. A green-house fern.

### ASPIDIUM ILICIFOLIUM GRACILE.

Fronds 9 to 12 inches long, dark green, stem and mid-rib covered with brown scales. The small engraving, 1, represents the upper side of one of the lower pinnæ, and 2, the underside of one of the upper pinnæ. Half-hardy fern.

### ASPIDIUM LONCHITIS.

Fronds 4 to 6 inches long, stems green, covered with brown scales, and also the crown. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnæ. Hardy fern.



1. 2.  
*Aspidium mucronatum.*

1.



1. 2.  
*Aspidium  
mucronatum laxum.*

2.



1. 2.  
*Asplenium alatum.*

3.



1. 2.  
*Asplenium compressum.*

4.



1. 2.  
*Asplenium lucidum.*

5.



1. 2.  
*Asplenium falcatum.*

6.



1. 2.  
*Asplenium flaccidum.*

7.



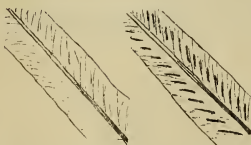
1. 2.  
*Asplenium formosum.*

8.



1. 2.  
*Asplenium  
hemionitis cristatum.*

9.



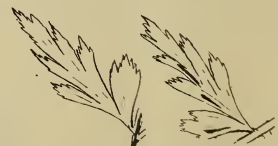
1. 2.  
*Asplenium nidus.*

10.



1. 2.  
*Asplenium nitidum.*

11.



1. 2.  
*Asplenium præmorsum.*

12.





1.



2.



3.



4.



5.



6.



7.



8.



9.



10.



11.



12.

### ASPIDIUM MURCRONATUM.

Fronds 9 inches long, stem light green, covered with scales. The small engravings, 1 and 2, represent the upper and lower surface of a pinnæ. A green-house fern.

### ASPIDIUM MUCRONATUM LAXUM.

Fronds 9 to 12 inches long, stems dark green, partially covered with brown scales. The crown quite covered. The small engraving, 1, represents the upper surface of one of the lower pinnæ. and 2, the underside of one of the upper pinnæ. A green-house fern.

### ASPLENIUM ALATUM.

Fronds 10 to 12 inches long, the underside of the stems are nearly black, the mid-rib is winged on each side forming a channel or groove. The apex of the fronds are fertile. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnæ, Native of America. A stove fern.

### ASPLENIUM COMPRESSUM.

Fronds 18 to 24 inches long, the pinnæ are fertile on the upper surface, The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnæ. Native of St. Helena. A green-house fern.

### ASPLENIUM LUCIDUM.

Fronds 12 to 36 inches long, the stems and pinnæ are clothed with brown scales. The fronds rise from a hairy rhizome. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnæ. Native of New Zealand. A green-house fern.

### ASPLENIUM FALCATUM.

Fronds 10 to 24 inches long, stems dark brown and slightly scaly. The scales are more numerous towards the base, the fronds springing from a slightly creeping rhizome. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnæ. Native of India. A green-house fern.

## ASPLENIUM FLACCIDUM.

Fronds 12 to 18 inches long, the underside of the stems change from green to black towards the base. The pinnæ are fertile on the upper surface. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. Native of New Zealand. A green-house fern.

## ASPLENIUM FORMOSUM.

Fronds 12 to 15 inches long and almost erect, stem black and polished. The small engravings, 1 and 2, represent the upper and lower surface of a pinnæ about  $\frac{1}{2}$  full size. Native of Tropical America. A stove fern.

## ASPLENIUM HEMIONITIS (CRISTATUM.)

Fronds 9 to 12 inches long, stems light brown. The small engravings, 1 and 2, represent the upper and lower surface of a frond. Native of Africa. A green-house fern.

## ASPLENIUM NIDUS.

Fronds 24 to 48 inches long, and 3 to 8 inches broad, the underside of mid-rib is black, also the lower veins. The small engravings, 1 and 2, represent a portion of the upper and lower surface of a frond. Native of Japan, and Queensland. A green-house fern

## ASPLENIUM NITIDUM.

Fronds 12 to 24 inches long, the base is covered with small black scales. The small engraving, 1, represents a portion of the upper surface of a frond, and 2, a smaller portion at a larger scale. Native of the East Indies. A stove fern.

## ASPLENIUM PRÆMORSUM.

Fronds from 12 to 24 inches long, rising from a creeping rhizome, the stems and ribs are covered with brown scales. The small engravings, 1 and 2, represent the upper and lower surface of part of a frond. Native of Madeira. A green-house fern.





1. 2.

*Asplenium*  
*præmorsum laceratum*

1.



1. 2.

*Asplenium tenellum.*

2.



1. 2.

*Asplenium zeylanicum.*

3.



1. 2.

*Blechnum brasiliense.*

4.



1. 2.

*Blechnum gracile.*

5.



1. 2.

*Blechnum latifolium.*

6.



1. 2.

*Blechnum occidentale.*

7.



1. 2.

*Blechnum spicant.*

8.



1. 2.

*Cheilanthes elegans*

9.



1. 2.

*Cheilanthes hirta.*

10.



1. 2.

*Cheilanthes tomentosa.*

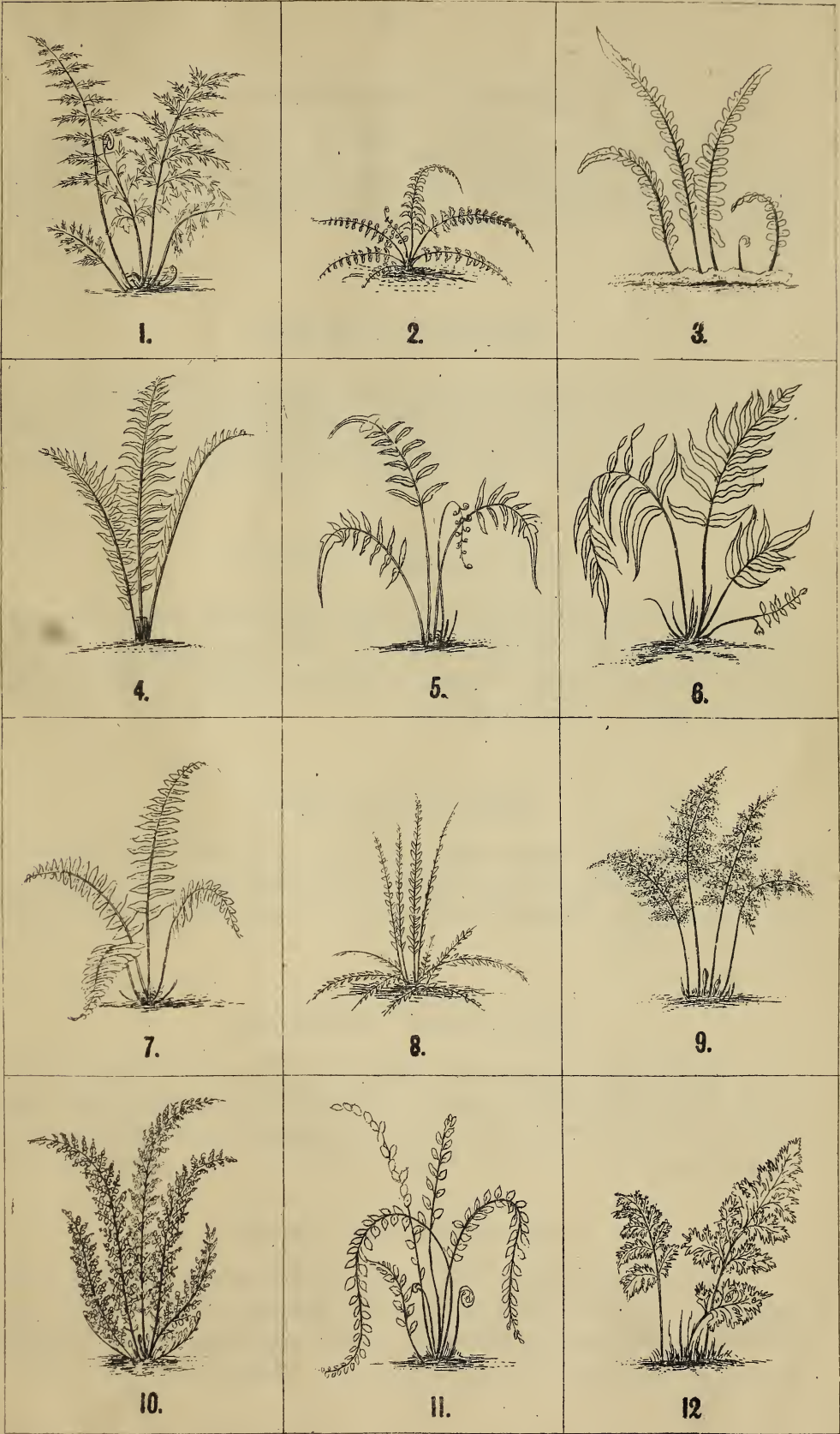
11.



1. 2.

*Cryptogramme crispus.*

12.



## BLECHNUM OCCIDENTALE

Fronds 12 to 15 inches long, reddish brown when young, changing to green with age, the stems slightly scaly. The small engravings, 1 and 2, represent the upper and lower surface of a pinnae. Native of the West Indies. A green-house fern.

## BLECHNUM SPICANT.

Sterile fronds 10 to 12 inches long, fertile fronds 12 to 15 inches long, more contracted and rising from the crown. The small engraving, 1, represents the upper surface of one of the sterile pinnæ, and 2, represent the underside of one of the fertile pinnae. Native of Europe. Hardy fern.

## CHEILANTHES ELGEANS.

Fronds 9 to 12 inches long, stems light brown, coated over with a greyish scale, changing to brown with age. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond, Native of Chili, Peru, and Mexico. A green-house fern.

## CAEILANTHES HIRTA.

Fronds 10 to 18 inches long, very hairy, and of a pale green, the stem is dark brown, and also coated with hairs. The small engravings, 1 and 2, represent the upper and lower surface of part of a frond. Native of South Africa. A green-house fern.

## CHEILANTHES TOMENTOSA.

Fronds 8 to 14 inches long, stem light brown and scaly, the upper surface is coated with light hairs, and the underside is coated with a white woolly substance. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnae. Native of America and Mexico. A green-house fern.

## CRYPTOGRAMME CRISPUS.

Fronds 6 to 12 inches long, the fertile fronds are contracted. The small engraving, 1, represents the upper surface of a portion of a sterile frond, and 2, represents a portion of the underside of one of the fertile fronds. Found in several parts of England, Wales, and Scotland. Hardy fern.



### ASPLENIUM PRÆMORSUM LACERATUM.

Fronds 12 to 18 inches long, stem green, changing to brown at the base and covered with brown hairs or scales. The small engraving, 1, represents the upper surface of a portion of a frond, and 2 a smaller portion at a larger scale. A green-house fern.

### ASPLENIUM TENELLUM.

Fronds about 12 inches long, fertile at the apex, underside of mid-rib nearly black. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. Native of the West Indies. A green-house fern.

### ASPLENIUM ZELANICUM.

Fronds 10 to 12 inches long, the underside of ribs and stem are green changing to pale brown, and covered with brown scales. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnae. Native of Ceylon. A stove fern.

### BLECHNUM BRASILIENSE.

Fronds 18 to 30 inches long, the base of the fronds and crown are covered with brown scales. The small engravings, 1 and 2, represent the upper and lower surface of a pinnae. Native of Brazil and Peru. A stove fern.

### BLECHNUM GRACILE.

Fronds 9 to 15 inches long, stem and mid-rib purplish brown. The small engravings, 1 and 2, represent the upper and lower surface of a pinnae. Native of Brazil. A green-house fern.

### BLECHNUM LATIFOLIUM.

Fronds 12 to 18 inches long, the base of stem is covered with brown scales. The small engravings, 1 and 2, represent the upper and lower surface of a pinnae. A green-house fern.



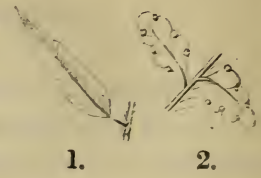
*Davallia canariensis.*

1.



*Davallia elegans.*

2.



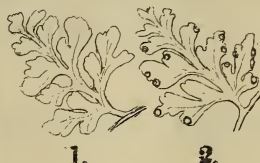
*Davallia heterophylla.*

3.



*Davallia immerea.*

4.



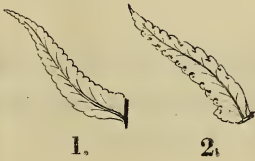
*Davallia mooreana.*

5.



*Davallia pentaphylla.*

6.



*Davallia scabra.*

7.



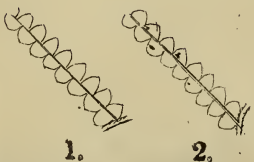
*Davallia tenuifolia stricta*

8.



*Davallia tyermanni.*

9.



*Gleichenia speluncæ.*

10.



*Gymnogramme  
decomposita.*

11.



*Gymnogramme parsonii.*

12.



1.



2.



3.



4.



5.



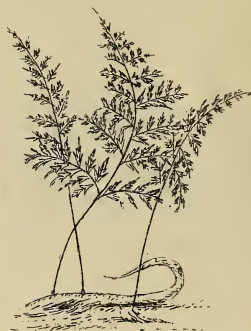
6.



7.



8.



9.



10.



11.



12.



## DAVALLIA CANARIENSIS.

Fronds 10 to 15 inches long, and 8 to 10 inches broad, springing from a stout creeping rhizome, which is covered with light brown hairs. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. Native of Portugal, N. Africa, Canary Isles. A green-house fern.

## DAVALLIA ELEGANS.

Fronds from 12 to 20 inches high, and 10 to 12 inches broad, springing from a stout creeping rhizome, which is covered with brown hairs, the small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. Native of China and the Malay Islands. A green-house fern.

## DAVALLIA HETEROPHYLLA.

Sterile fronds about 4 inches long, fertile fronds are the narrowest and are lobed, the fronds springing from a wiry creeping rhizome which is covered with stiff brown hairs. The small engraving, 1 represents the shape of one of the fronds with part of the rhizome, and 2, represents a portion of the fertile frond. Native of the Malay Islands. A stove fern.

## DAVALLIA IMMERSA.

Fronds 12 to 18 inches long, and 6 to 9 inches broad, the fronds spring from a light green creeping rhizome which is covered with light brown scales. The small engraving, 1, represents a portion of a frond, and 2, a smaller portion at a larger scale. Native of Hindoostan and Java.

## DAVALLIA MOOREANA.

Fronds 24 to 30 inches long, and 12 to 18 inches broad, springing from a creeping rhizome which is clothed with narrow brown scales. The small engravings 1 and 2, represent a portion of the upper and lower surface of a frond. Native of Borneo. A stove fern.

## DAVALLIA PENTAPHYLLA.

Fronds 6 to 12 inches long, springing from a strong creeping rhizome thickly covered with dark brown hairs. The small engravings, 1 and 2, represent the upper and lower surface of a pinnæ. Native of Java. A stove fern.

## DAVALLIA SCABRA.

Fronds 12 to 18 inches long, and 9 to 12 inches broad, stems green, changing to brown, the frond springs from a creeping rhizome. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnae. Native of Ceylon and Japan. A stove fern.

## DAVALLIA TENUIFOLIA STRICTA.

Fronds 12 to 28 inches long, springing from a slightly creeping rhizome, the stem and rib are of a reddish cast. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. Native of the Pacific Islands. A green-house fern.

## DAVALLIA TYERMANNI.

Fronds 6 to 12 inches long, springing from a creeping rhizome covered with grey or silvery hairs. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. Supposed to come from West Tropical Africa. A stove fern.

## GLEICHENIA SPELUNCAE.

Length of fronds indefinite, springing from a wiry creeping rhizome which is nearly naked. The small engravings, 1 and 2, represent a portion of the upper and lower surface of a frond. Native of New South Wales, and Tasmania. A green-house fern.

## GYMNOGRAMME DECOMPOSITA.

Fronds 15 to 20 inches long, and 10 to 12 inches broad, the stem when young is scattered over with yellow powder, and the under surface of the frond is covered all over with yellow powder. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. Native of Brazil. A stove fern.

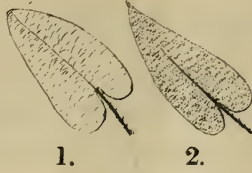
## GYMNOGRAMME PARSONII.

Fronds 10 to 12 inches long, the under surface of the fronds are covered with yellow powder, stem black. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. A stove fern.



1. 2.  
*Gymnogramme*  
*wettenhalliana*.

1.



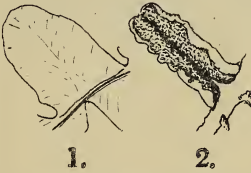
1. 2.  
*Hemionitis cordata*.

2.



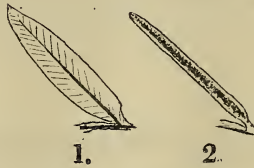
1. 2.  
*Hemionitis palmata*.

3.



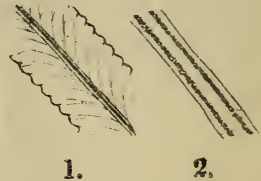
1. 2.  
*Lomaria banksii*.

4.



1. 2.  
*Lomaria cycadæfolia*.

5.



1. 2.  
*Lomaria patersoni*.

6.



1. 2.  
*Meniscium simplex*.

7.



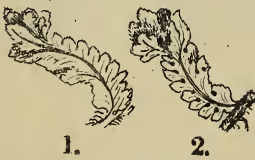
1. 2.  
*Nephrodium*  
*cristatum daddsi*.

8.



1. 2.  
*Nephrodium denticulata*

9.



1. 2.  
*Nephrodium*  
*filix-mas cristata*.

10.



1. 2.  
*Nephrodium glabella*.

11.



1. 2.  
*Nephrodium hispidum*.

12.





1.



2.



3.



4.



5.



6.



7.



8.



9.



10.



11.



12.

## GYMNOGRAMME WETTENHALLIANA.

Fronds 12 to 18 inches long, and 4 to 6 inches broad, the under surface is covered over with white powder, stem polished black. The small engravings, 1 and 2, represent a portion of the upper and lower surface of a frond. Native of Peru. A stove fern.

## HEMIONITIS CORDATA.

Sterile frond 2 to 6 inches long. Fertile frond 5 to 8 inches long. The small engraving, 1, represents the upper surface of the sterile frond, and 2, the under surface of the fertile frond. Native of India. A stove fern.

## HEMIONITIS PALMATA.

Sterile frond 2 to 6 inches long, fertile frond 6 to 10 inches, the fronds are covered with soft brown hairs. The small engravings, 1 and 2, represent the upper and lower surface of the fertile frond. Native of the West Indies and Mexico. A stove fern.

## LOMARIA BANKSII.

Sterile fronds 6 to 8 inches long, the fertile fronds smaller and more contracted. The small engraving, 1, represents the upper surface of a sterile pinnae, and 2, the under surface of a fertile pinnae. Native of New Zealand. A green-house fern.

## LOMARIA CYCADÆFOLIA.

Fronds 24 to 36 inches long, and 10 inches broad, stem and rib green, with brown scales, changing to grey at base. The small engraving, 1, represents the upper surface of a sterile pinnae, and 2, the under surface of a fertile pinnae. Native of Brazil. A green-house fern.

## LOMARIA PATERSONI.

Fronds 6 to 8 inches long,  $\frac{3}{4}$  inch broad, dark green. The small engraving, 1, represents a portion of a sterile frond, and 2, a portion of a fertile frond. Australia and New Zealand. A stove fern.

## MENISCIMUM SIMPLEX.

Sterile frond 4 to 10 inches long, fertile frond 12 to 14 inches long, stem dark brown veins, are in small squares. The small engraving 1, represents the upper surface of sterile pinnæ, and 2, the underside of a fertile pinnæ. Native of Peru and Hong Kong. A stove fern.

## NEPHRODIUM CRISTATUM DADSII.

Fronds 9 to 12 inches long, light green, a few brown scales on the old stems. The small engravings, 1 and 2, represent the upper and lower surface of portion of a frond. Hardy fern.

## NEPHRODIUM DENTICULATA.

Fronds 12 to 24 inches, long and 8 to 10 inches broad, stem changing to dark brown at the base. The base and crown are covered with long dark brown scales. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. Native of the West Indies. A stove fern.

## NEPHRODIUM FILIX-MAS CRISTATA.

Fronds 12 to 18 inches long, and 6 to 8 inches broad, dark green, stem covered with light brown scales, thicker at the base, and almost covering the crown. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. Native of the West of England. Hardy fern.

## NEPHRODIUM GLABELLA.

Fronds 9 to 12 inches long, stem changing to light brown at the base, and with a few scattered scales. The small engravings, 1 and 2, represent a portion of the upper and lower surface of a frond. Full size Native of Zealand. Green-house fern.

## NEPHRODIUM HISPIDUM.

Fronds 12 to 18 inches long, and 8 to 12 inches broad, stem and ribs covered entirely with dark brown scales, the fronds springing from a stoutly creeping rhizome. The small engravings, 1 and 2, represent a portion of the upper and lower surface of a frond. Native of Zealand and Australia. A green-house fern.





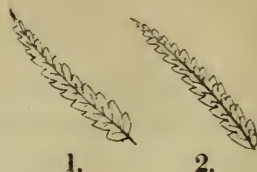
*Nephrodium*  
*molle corymbiferum.*

1.



*Nephrodium*  
*molle ramosissimum.*

2.



*Nephrodium serra.*

3.



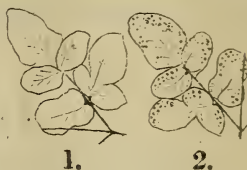
*Nephrolepis exaltata.*

4.



*Nephrolepis tuberosa.*

5.



*Nothochlæna flavens.*

6.



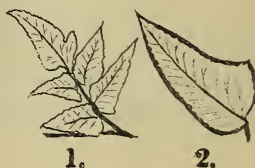
*Onychium japonicum.*

7.



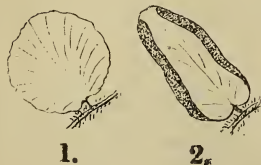
*Pellæa geraniifolia.*

8.



*Pellæa hastata.*

9.



*Pellæa rotundifolia.*

10



*Pteris argyræa.*

11.



*Pteris chilensis.*

12



1.



2.



3.



4.



5.



6.



7.



8.



9.



10.



11.



12.

### NEPHRODIUM MOLLE CORYMBIFERUM.

Fronds 10 to 12 inches long, light green stem, and rib changing to purple at the base, the small engravings, 1 and 2 represent a portion of the upper and lower surface of a frond. A stove fern.

### NEPHRODIUM MOLLE RAMOSISSIUM.

Fronds 10 to 12 inches long, light green, stem changing to purple. The small engravings, 1 and 2, represent a portion of the upper and lower surface of a frond. A stove fern.

### NEPHRODIUM SERRA.

Fronds 9 to 15 inches long, pale green stem covered with brown scales, the small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. A Native of the West Indies. A stove fern.

### NEPHROLEPIS EXALTATA.

Fronds 12 to 24 inches long, stem light brown covered at the base, with brown scales, the small engravings, 1 and 2, represent the upper and lower surface of a pinnae. Native of Mexico and Brazil. A stove fern.

### NEPHROLEPIS TUBEROSA.

Fronds 12 to 36 inches long, the stem green with a few brown scales changing to nearly black at the base, wiry fibres spring from the roots and are fertile at the ends, the small engravings, 1 and 2 represent the upper and lower surface of one of the pinnae. Native of the East Indies. A stove fern.

### NOTHOCHLÆNA FLAVENS.

Fronds 6 to 10 inches high. stem purplish black polished, under surface of fronds entirely covered with yellow powder. The small engravings, 1 and 2 represent the upper and lower surface of a portion of a frond. Native of Tropical America. A stove fern.



### ONYCHIUM JAPONICUM.

Fronds 12 to 14 inches long and 6 inches broad, springing from a slightly creeping rhizome, the small engravings, 1 and 2 represent a portion of the upper and lower surface of a frond. Native of India. A greenhouse fern.

### PELLÆA GERANIÆFOLIA.

Fronds 8 to 10 inches high and 3 to 4 inches wide, of a dark green, the stems are polished and are nearly black. The small engravings, 1 and 2, represent a portion of the upper and lower surface of a frond. Native of the East Indies. A greenhouse fern.

### PELLÆA HASTATA.

Fronds 18 to 24 inches long, stem and midrib polished, dark brown or nearly black. The small engraving, No. 1, represents a portion of the upper surface of part of a frond, and 2 a smaller portion at a larger scale. Native of South Africa. A stove fern.

### PELLÆA ROTUNDIFOLIA.

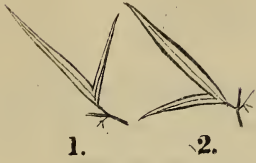
Fronds 6 to 12 inches long, dark green, the stems throughout covered with stiff brown scales, the fronds springing from a stout creeping rhizome, the small engraving, 1 represents the upper surface of a sterile pinnae, 2 the underside of a fertile pinnae. Native of New Zealand. A greenhouse fern.

### PTERIS ARGYÆA.

Fronds from 24 to 48 inches long, the pinnae are nearly white, one-third of the way up from the mid-rib and are slightly mottled, the small engravings, 1 and 2, represent the upper and lower surface of one of the pinnae. Native of the East Indies. A greenhouse fern.

### PTERIS CHILENSIS.

Fronds 18 to 24 inches long, of a deep green. The small engraving, 1, represents a portion of a sterile frond, and 2 a portion of a fertile frond. Native of Chili. A greenhouse fern.



*Pteris  
cretica albo-lineata.*

1.



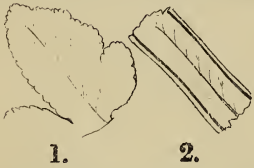
*Pteris leptophylla.*

2.



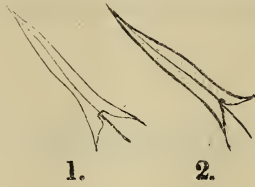
*Pteris longifolia.*

3.



*Pteris palmata.*

4.



*Pteris sagittifolia.*

5.



*Pteris scaberula.*

6.



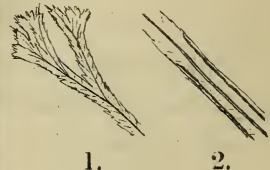
*Pteris semipinnata.*

7.



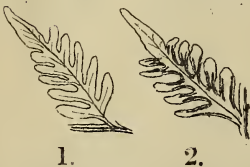
*Pteris serrulata.*

8.



*Pteris serrulata cristata*

9.



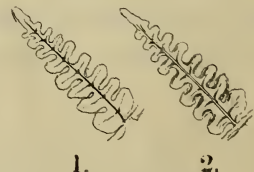
*Pteris tremula.*

10.



*Pteris tricolor.*

11.



*Pteris vespertilionis.*

12.



1.



2.



3.



4.



5.



6.



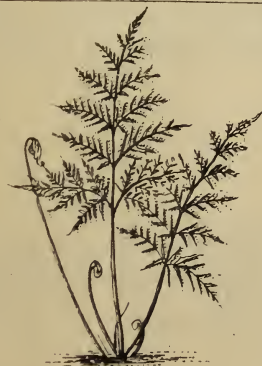
7.



8.



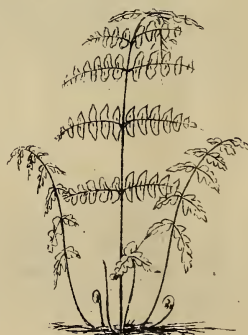
9.



10.



11.



12.



## PTERIS CRITICA ALBO-LINEATA.

Sterile fronds 9 to 12 inches long, fertile fronds 12 to 18 inches long, each pinnæ has a broad band of white in the centre. The small engravings, 1 and 2 represent a portion of the upper and lower surface of a fertile frond. Native of Japan. A greenhouse fern.

## PTERIS LEPTOPHYLLA.

Fronds 8 to 14 inches long, the pinnæ of the sterile fronds are finely serrated. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a fertile frond. Native of Brazil. A stove fern.

## PTERIS LONGIFOLIA.

Fronds 12 to 24 inches long of a pale green, and coated with white hairs, the fronds springing from a creeping rhizome, the small engravings, 1 and 2, represent the upper and lower surface of a pinnæ. Found all over the Tropics. A greenhouse fern.

## PTERIS PALMATA.

Fronds 6 to 12 inches long, stem and mid-rib black, stem polished, the small engraving No. 1 represents a portion of the upper surface of a sterile frond, and 2 the lower surface of part of a fertile frond. Native of America, West Indies and Peru. A greenhouse fern.

## PTERIS SAGITTIFOLIA.

Fronds 6 to 9 inches long, mid-rib and stem black and polished. The small engravings 1 and 2 represent the upper and lower surface of a frond. Native of Brazil. A stove fern.

## PTERIS SCALEMLA.

Fronds 12 to 18 inches long, springing from a black, creeping rhizome. The small engravings, 1 and 2, represent a portion of the upper and lower surface of a frond. Native of New Zealand. A green-house fern.

## PTERIS SEMIPINNATA.

Fronde 18 to 20 inches long, stem and ribs dark brown towards the base. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. Native of China, Japan, and Borneo. A greenhouse fern.

## PTERIS SERRULATA.

Fronde 9 to 12 inches long 6 to 9 inches broad, the stems are light brown. The small engravings, 1 and 2, represent the upper and lower surface of part of a frond. Native of China and Japan. A greenhouse fern.

## PTERIS SERRULATA CRISTATA.

Fronde 9 to 14 inches long and 6 to 8 inches broad, the stems are light brown. The small engraving 1 represents a portion of a frond with tassel, and 2 represents a portion of the underside continued from lower end of No. 1. A greenhouse fern.

## PTERIS TREMULA.

Fronde 24 to 40 inches long and 6 to 18 inches broad, the stems are brown and polished, slightly coated with scales. The small engravings, 1 and 2 represent the upper and lower surface of a portion of a frond. Native of Australia and New Zealand. A greenhouse fern.

## PTERIS TRICOLOR.

Fronde 12 to 24 inches long, dark green,  $\frac{1}{4}$  up each pinnæ on both sides of mid-rib is pink, with a margin of white. The small engravings, 1 and 2, represent the upper and lower surface of a pinnæ. A stove fern.

## PTERIS VESPERTIBIONIS.

Fronde 18 to 24 inches long, stem purplish brown, scaly at the base, the under surface is nearly white. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. Native of Tropical America and West Indies. A stove fern.



*Platyserium alcicorne.*

1.



*Polypodium aureum.*

2.



*Polypodium cambricum.*

3.



*Polypodium  
cambricum Whitii.*

4.



*Polypodium drepanum.*

5.



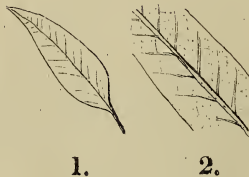
*Polypodium dyropteris.*

6.



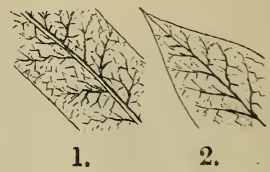
*Polypodium fraxinifolium*

7.



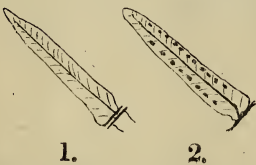
*Polypodium heteractis.*

8.



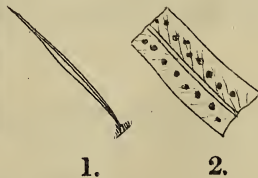
*Polypodium musæfolium.*

9.



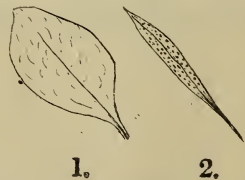
*Polypodium plumula.*

10.



*Polypodium rigidum.*

11.



*Polypodium rupestris.*

12.





1.



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3.



4.



5.



6.



7.



8.



9.



10.



11.



12.

### PLATYCERIUM ALCICORNE.

Fronds 24 to 36 inches long; apex is often divided into six or eight points, the under surface is covered with white matted down. The small engraving 1 represents the upper side of a frond; 2 the apex of a frond with sori. Native of Australia. A greenhouse fern.

### POLYPODIUM AUREUM.

Fronds 30 to 48 inches long, stems purplish brown, springing from a stout creeping rhizome, which is covered with light brown soft hairs or scales. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. Native of Mexico. A stove fern.

### POLYPODIUM CAMBRICUM.

Fronds 12 to 18 inches high, 3 to 5 inches broad, springing from a scaly, creeping rhizome. The small engravings, 1 and 2, represent the upper and lower surface of a part of a frond. Native of Wales. Hardy fern.

### POLYPODIUM CAMBRICUM WHITII.

Fronds 6 to 10 inches high, and 2 to 4 inches broad, springing from a stout creeping rhizome. The small engravings, 1 and 2, represent the upper and lower surface of a portion of a frond. Hardy fern.

### POLYPODIUM DREPANUM.

Fronds 12 to 14 inches long, stem covered with brown scales. The small engraving 1 represents a small portion of the upper side of one of the fronds, and 2 represents the underside of a smaller portion at a larger scale. A greenhouse fern.

### POLYPODIUM DRYOPTERIS.

Fronds 6 to 12 inches long, stems scaly, the fronds spring from a wiry creeping rhizome. The small engravings, 1 and 2 represent the upper and lower surface of a portion of a frond. From the mountain districts of Britain. Hardy fern.

## POLYPODIUM FRAXINIFOLIUM.

Fronds 12 to 24 inches long, the stems and mid-rib brownish purple. The small engraving 1 represents a portion of a frond, and 2 a smaller portion at a larger scale. Native of Tropical America. A stove fern.

## POLYPODIUM HETERACTIS.

Fronds 6 to 9 inches high and 2 inches wide, underside and stem are covered entirely over with white cottony substance, the fronds springing from a creeping brown rhizome. The small engraving 1 represents the upper surface of a frond. 2, a small portion at a larger scale. Native of Ceylon. A stove fern.

## POLYPODIUM MUSÆFOLIUM.

Fronds 12 to 36 inches long and 3 to 4 inches broad light green, veins dark green, fronds springing from a creeping rhizome. The small engraving 1 represents a portion of a frond, 2 the apex of a frond. Native of the Malay Islands.

## POLYPODIUM PLUMULA.

Fronds 12 to 18 inches long, and  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches broad, mid-rib and stem green, changing to purplish brown at base. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnæ. Native of Tropical America. A stove fern.

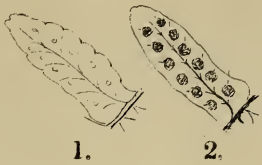
## POLYPODIUM RIGIDUM.

Fronds 10 to 20 inches long and nearly three-quarters of an inch broad springing from a slightly creeping rhizome. The small engraving 1 represents the shape of one of the fronds, and 2 a portion of the underside of one of the fronds. Native of America. A stove fern.

## POLYPODIUM RUPESTRIS.

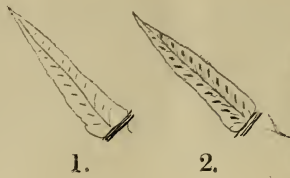
Sterile fronds  $1\frac{1}{2}$  to 2 inches long, fertile fronds 3 to 4 inches long. The under surface of the fronds are covered with a white cottony substance. The fronds spring from a creeping rhizome, which is covered with brown scales. The small engraving 1 represents the upper surface of a sterile pinnæ and 2 the underside of a fertile pinnæ. Native of Australia and New Zealand. A greenhouse fern.





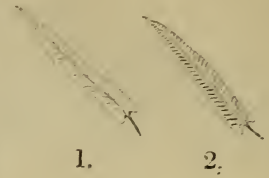
1. 2.  
*Polypodium vulgare.*

1.



1. 2.  
*Scolopendrium krebssii.*

2.



1. 2.  
*Scolopendrium vulgare.*

3.



1. 2.  
*Scolopendrium  
vulgare crispum.*

4.



1. 2.  
*Scolopendrium  
vulgare flabellatum.*

5.



1. 2.  
*Scolopendrium vulgare  
margmato-irregulare.*

6.



1. 2.  
*Scolopendrium  
vulgare morganii.*

7.



1. 2.  
*Scolopendrium vulgare.  
sublicato-striatum.*

8.



1. 2.  
*Todea africana.*

9.



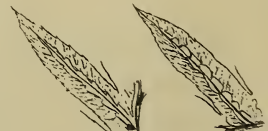
1. 2.  
*Todea pellucida.*

10.



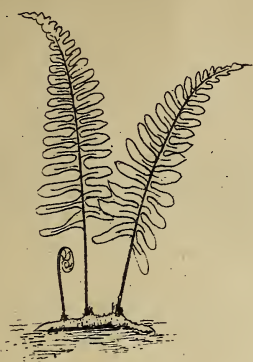
1. 2.  
*Trichomanes radicans.*

11



1. 2.  
*Woodwardia orientalis.*

12.



1.



2.



3.



4.



5.



6.



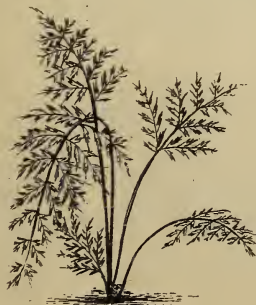
7.



8.



9.



10.



11.



12.

## POLYPODIUM VULGARE.

Fronds 6 to 12 inches long, springing from a stout creeping rhizome, stems covered with brown scales. The small engravings, 1 and 2, represent the upper and lower surface of one of the pinnæ. All parts of Europe. Hardy fern.

## SCOLOPENDRIUM KREBSII.

Fronds 12 to 24 inches long, dark green stem and mid-rib changing to black at the base, and covered with brown scales, the small engravings, 1 and 2, represent the upper and lower surface of one of the pinnæ. Native of the Cape of Good Hope. A green-house fern.

## SCOLOPENDRIUM VULGARE.

Fronds from 8 to 20 inches long, stem dark brown and also part of the way up the underside of the mid-rib, the stem is covered with brown scales. The small engravings, 1 and 2, represent the upper and lower surface of a frond. Most parts of England. Hardy fern.

## SCOLOPENDRIUM VULGARE CRISPUM.

Fronds 12 to 18 inches long, light green stems covered with whitish scales. The small engravings, 1 and 2, represent the upper and lower surface of a frond. Hardy fern.

## SCOLOPENDRIUM VULGARE FLABELLATUM.

Fronds from 6 to 12 inches long, the rib and stem is scaly. The small engravings, 1 and 2, represent the upper and lower surface of a frond.

## SCOLOPENDRIUM VULGARE MARGINATO-IRREGULARE.

Fronds 8 to 10 inches long, stem and rib covered with dark brown scales. The small engravings, 1 and 2, represent the upper and lower surface of a frond. Hardy fern.



### SCOLOPENDRIUM VULGARE MORGANII.

Fronds from 9 to 12 inches long, stem and rib covered with dark brown scales. The small engravings, 1 and 2, represent the upper and lower surface of frond. Hardy fern.

### SCOLOPENDRIUM VULGARE SUBLICATO STRIATUM.

Fronds 9 to 12 inches high, the stem and ribs are covered with brown scales. The small engravings, 1 and 2, represent the upper and lower surface of a frond. Hardy fern.

### TODEA AFRICANA.

Fronds 36 to 48 inches high, light green stem and rib, changing to purplish brown at the crown and covered with small hairs. The small engraving 1 represents the upper side of a portion of a frond, and 2 the under-side of a smaller portion at a larger scale. Native of South Africa. A greenhouse fern.

### TODEA PELLUCIDA.

Fronds 6 to 12 inches high, dark green stem changing to a reddish brown at the crown, and covered with dark brown scales. The small engravings 1 and 2, represent the upper and lower surface of a portion of a frond. Native of New Zealand. A greenhouse fern.

### TRICHOMANES RADICANS.

Fronds 6 to 9 inches long of a dark green, the veins are much darker green, the frond is almost transparent and springs from a creeping rhizome, which is scaly. The small engravings 1 and 2 represents a portion of the upper and lower surface of a frond. Native of the British Isles. A green house fern.

### WOODWARDIA ORIENTALIS.

Fronds 18 to 84 inches long, stem and rib reddish brown, stem covered with brown scales, the base is entirely covered. The small engravings, 1 & 2, represent the upper and lower surface of a portion of a frond. Native of Japan. A greenhouse fern.

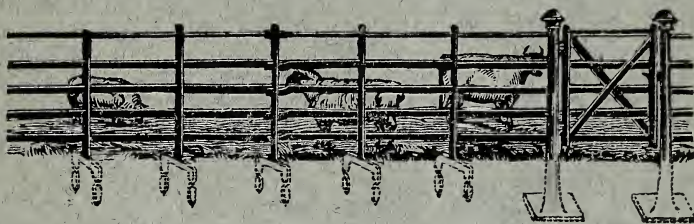


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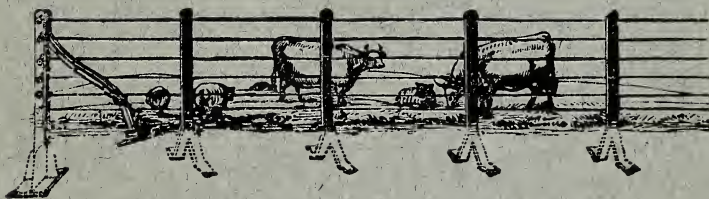
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They are 50 per cent, better than the ordinary Socket Pipes, and can be fixed at about the same cost.


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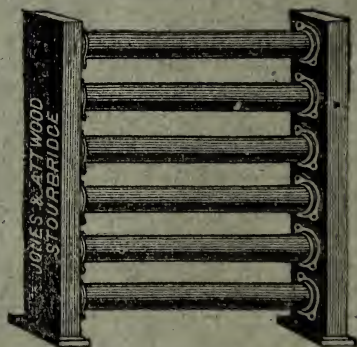
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